Galaxy Assault - Design Document

Project Team

Martin Ferschl (if20b307) - Project Leader
Miriam Böhm (if20b066)
Irlind Doraci (if21b191)
David Henickl (if21b183)

Repositories

github: https://github.com/Miriaana/GameDev-SpaceShooter
fhtw gitlab: https://git.technikum-wien.at/game/game-lv/ss23/Group9_SpaceShooter

Content

Galaxy Assault is a semi-cooperative 2.5D top-down shooter. Players have to compete for the most points while trying to stay alive through a barrage of obstacles and enemies, such as asteroids and a boss fight.

Plot

Each player takes the role of a space pilot controlling one of a variety of spaceships, tasked with the mission of reaching and defeating a boss in a given timeframe.

Characters

The players take on the aliases of Yellow, Blue, Purple and Green; names that correspond with their chosen spaceship's color theme.

Concept

Genre

Couch-coop, top-down, shoot-em-up.

Expected result

A top-down multiplayer space shooter that can be completed in a given timeframe. During the Gameplay, the players face multiple obstacles and fight a final boss after the main gameplay portion. At the end the player with the most points is declared the winner.

Game Mechanics

Player Guided Mechanics

- The player can move the spaceship in all four directions.
- The player can fire two different types of weapon systems, one of which is more powerful but limited by ammunition.
- The player can collect any form of collectable by colliding with it in the game world.
- The player can collide with obstacles or other players and take damage.

Environment Guided Mechanics

- Obstacles (asteroids, enemy spaceships etc) spawn in regular intervals.
- Destroyed obstacles drop collectables such as ammunition and points.
- After the timer has run out a bossfight is started.
- The game ends after the players manage to defeat the boss or if they all die to the bosses attacks.

What is special in your game?

- Proactive gameplay is encouraged as any collectable is only ever spawned when an obstacle is destroyed.

How to play your game?

- The Player uses the wasd keys or the left control stick to move their ship around.
- The Player uses the left/right mouse button or the left/right trigger to fire their weapon systems.
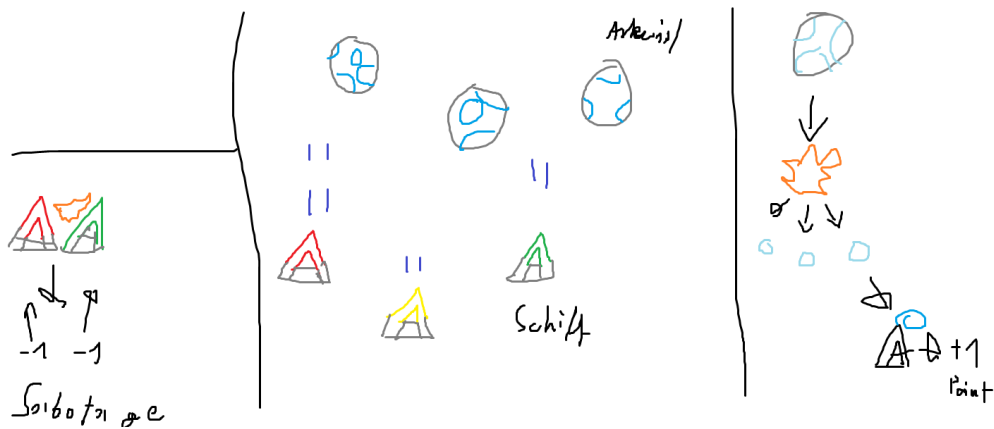
Development Environment

- Unity Engine 2021.3.11 - Level Design
- Visual Studio 2022 - Scripting
- Krita - Texture Creation

Level-Design

The game features only one level with an outer space skybox doubling as a background. Player's start from the bottom and fire upwards, which is where obstacles will be spawned into the environment.

Sketches

Color scheme – Mood board

Look and Feel

Should look like a sci-fi space adventure and feel like a power-fantasy, high-risk high reward shooter.

Technical Specification

- 500 MB Free Disc Space
- 2 GB RAM
- 1 GHz CPU
- Windows 8/ macOS X 10.9/ Ubuntu 12.04

Final Product Backlog and Time/Cost Estimation

Backlog	Status	Team Members	estimated Time	Costs (estimated 20€/h)	actual Time/Cost
UI	done	David	3h	60€	2h
Bossfight	done	Martin	4h	80€	4h
Game End	done	David	1h	20€	4h
Ammunition	done	David	3h	60€	1h
Ship Selection	done	Miriam, Martin	4h	80€	5h + 6h
Particles	done	Irlind	4h	80€	5h
Weapon Systems	done	Martin	1h	20€	0.5h
Balancing	done	Martin	3h	60€	30min
Code and Project Cleanup	done	Martin	2h	40€	3h
Final Polish (misc)	done	Martin / Miriam / Irlind / David	3h	60€	6h
additional Player Interaction	dropped (too time intensive)		6h+	120€+	---
Total Time and Costs (final project sprint):			~34h	680€	37h / 740€
Time spent before/for MVP			6h	120€	6h / 120€
Total Time and Costs (project with previous sprints):			~40h	800€	43h / 860€